Poster 8: Treatment with neoadjuvant chemotherapy for patients with Stage III endometrial cancer is associated with multiple clinical and sociodemographic factors, and with significantly worse overall survival, compared to primary surgery

Presenting Author: Patrick Penalosa, MD, Department of Obstetrics, Gynecology and Reproductive Sciences, Division of Gynecologic Oncology, University of California, San Diego

Topic
Endometrial

Objectives
To compare overall survival (OS) among patients with stage III endometrial cancer treated with neoadjuvant chemotherapy (NACT) versus primary surgery and to identify factors associated with receiving of NACT.

Methods
We performed a retrospective cohort study of Stage III endometrial cancer patients diagnosed between 2006 and 2021, registered in the National Cancer Database (NCDB). Baseline demographic and clinicopathologic characteristics were dichotomized and compared between treatment groups. Univariate modified Poisson regression with robust variance was used to estimate relative risk (RR) of receiving NACT compared to primary surgery. Univariate overall survival (OS) was evaluated with Kaplan-Meier's (K-M) method and a multivariate analysis was conducted using time dependent Cox regression.

Results
Among 53,354 patients, 50,658 (94.9%) underwent primary surgery and 2,696 (5.1%) received NACT. The frequency of NACT increased during the study period. Factors associated with greater likelihood of receiving NACT included high grade, non-endometrioid histology, Charlson Deyo (CD) score ≥2, Medicaid insurance, non-White race, treatment at an academic facility, and residing farther from the treating facility. K-M analysis showed that NACT, high grade, CD score ≥ 2, age ≥ 60, Medicaid insurance, non-White race, residing ≥ 50 miles from the treating facility and receiving any radiation (RT) were significantly associated with worse OS. In a time-dependent multivariable Cox model, NACT remained significantly associated with worse OS compared to primary surgery (HR=1.95, 95% CI = 1.37 to 2.75, p< 0.001). Other factors that were significantly associated with poor prognosis on multivariable analysis included older age, higher grade, CD score ≥ 2, Medicaid insurance, receiving RT, non-White race and residing farther from the treating facility.

Conclusions
Clinical, social and demographic factors are significantly associated with the decision for NACT or primary surgery, and with outcomes, in patients with advanced endometrial cancer. After adjustment for multiple prognostic factors, NACT is associated with nearly twice the risk of all-cause mortality. Our findings suggest that better understanding of the heuristics and biases that influence treatment choice could alter decision making, change recommendations and improve outcomes. Further studies to identify the rationale for NACT (deferring surgery), and to refine prognostic factors, may be helpful. Notably, the NCDB does not include information on the possible confounders of bulk and distribution of disease. Attention to these factors in future research may be informative.

Uploaded File(s)
Abstract Table or Graph
INEXBPJK-2393718-1-ANY.pdf